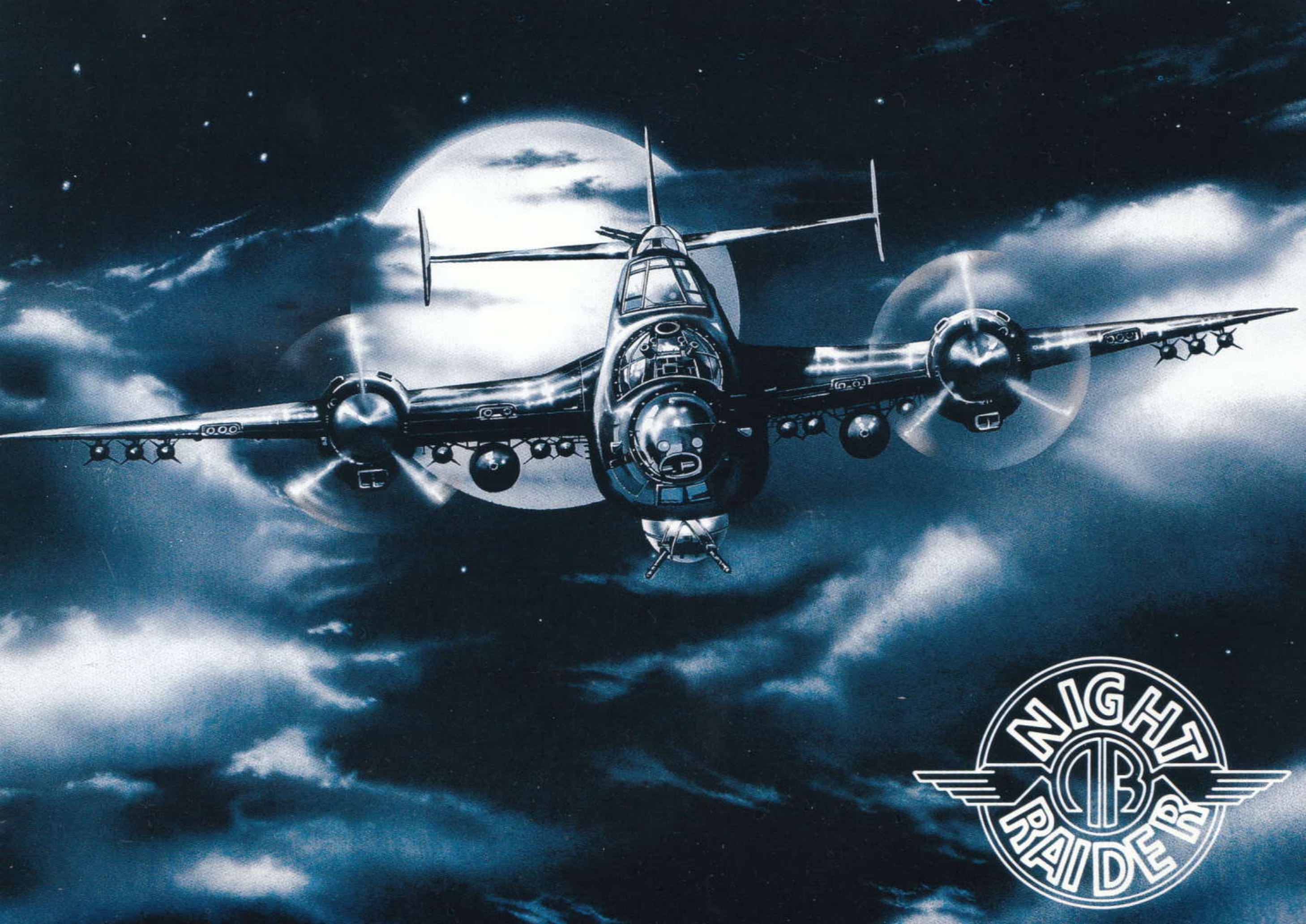

NIGHT
RAIDER

NIGHT RAIDER

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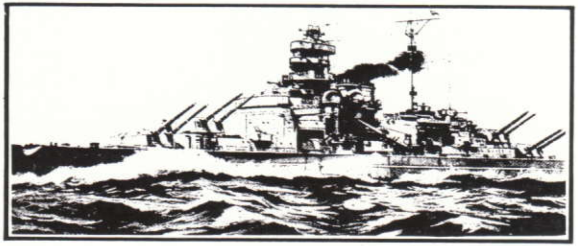
INTRODUCTION TO NIGHT RAIDER

Night Raider is a realistic flight/combat game, which simulates the famous World War II mission to destroy the fearsome German battleship, the *Bismarck*.

At perhaps the most critical point of World War II, you take on the role of a dive bomber pilot. You have been sent aboard the huge aircraft carrier *HMS Ark Royal*, your mind on one mission – to seek and destroy the most feared German warship on the high seas, the *Bismarck*.

In the seat of your Avenger torpedo bomber you'll be confronted by a cockpit containing an array of real time controls, gauges and switches, all adding to the excitement of actually being there. Add to this the facility of being able to see the outside world from the view point of your tail gunner, take control of the engine in the engineer's seat or the map screen of your navigator – all at the press of a button.

HISTORY OF THE BISMARCK

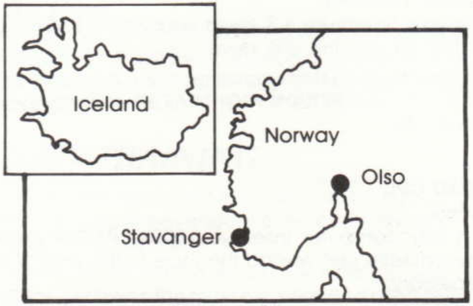


Originally launched amidst great ceremony on February 4th, 1939, the 50,000 ton *Bismarck* was set to become the most famous German warship of World War II. The mighty *Bismarck*, 880 feet in length by 120 feet wide was heavily armed with eight remote controlled 38 cm guns and a backup of six 15 cm guns. Her sides and turrets were protected by thirteen inch thick armour plating. The *Bismarck*, despite being a battleship was also capable of carrying six Arado Ar196 seaplanes which were launched from her deck by catapult for spotting and general reconnaissance.

SIGHTING OF THE BISMARCK

The *Bismarck* set to sea on May 18th, 1941 alongside the cruiser *Prinz Eugen* escorted by five fuel tankers and two supply ships. It was intended that the *Bismarck* act as a decoy; drawing battleship escorts away from important convoys allowing the *Prinz Eugen* to go in for the kill.

On the night of May 20th, 1941 a group of Norwegian secret agents in a coastal network spanning the area from Oslo to Stavanger, led by Viggo Axelssen were to achieve the biggest coup of the entire war, the *Bismarck*.



British forces were alerted by Axelssen who, as part of 'Operation Cheese', transmitted a coded message via a chain of contacts, eventually reaching London.

Just after midnight on the night of May 20th, Commander Norman Denning of Royal Navy Intelligence was awoken by a cable from Captain Harry Denham the British Naval Attaché in Stockholm. The Swedish cruiser *Gotland* had spotted the German fleet's course. This message, along with one received via the Norwegian agents, prompted immediate action, RAF Coastal Command were alerted to scour the Norwegian coast until the ships were spotted and positively identified. A Spitfire of the Photographic Reconnaissance Unit had pinpointed the *Bismarck* along with the *Prinz Eugen* in Korsfjord the entrance to Bergen harbour.

By 9 p.m. of May 21st, Admiral Tovey, the Navy's Commander-in-Chief, made the decision that the battle cruiser *Hood* was to take the battle ship *Prince of Wales* plus six destroyers and head for Iceland to be re-fuelled and then to guard the south-west of the island.

The group, now twenty strong, of British ships in search of the *Bismarck*, first caught sight of its quarry at 5.35 a.m. on May 24th.

THE SINKING OF THE BISMARCK

At a range of 25,000 yards, *Hood* opened fire, unfortunately all of the *Hood's* shells, each weighing a ton, missed the target. The Germans retaliated with a battery of shots which were all dead on target. The *Hood* was subsequently sunk taking with her all but three of her 1400 crew and officers.

At around 10 p.m. nine Swordfish bi-planes of the 825 Squadron took off from the aircraft carrier *Victorious* each armed with an eighteen inch torpedo. Diving through the heavy flak they saw one torpedo strike the target, jamming her port rudder. The damage although minimal, disproved the Germans' claim that the *Bismarck* was invincible. The *Bismarck* now became a sitting target for the British, moving at only some eight knots in sluggish circles.

At the time of the *Bismarck's* attack she was on her way to the port of St. Nazaire in Brittany to receive repairs.

Around 9 p.m. on the night of May 26th, fifteen Swordfish were launched from the deck of the *Ark Royal* despite a heavy swell causing her deck to move up and down by almost 60 feet.

The flag officer of the *Bismarck*, Admiral Lütjens sent a signal to Berlin *"Ship unmanoeuvrable. We fight to the last shell. Long live the Führer."*

On the night of May 25th, a new American prototype torpedo plane secretly rushes to the deck of the *Ark Royal*. This plane was the *Grumman Avenger* – soon to be the best known torpedo bomber of World War II.

By 9.30 a.m. on the morning of May 26th the Avenger had destroyed the two main forward turrets and the two aft turrets of the *Bismarck*; who became a sitting target and eventually sank, stern first, around 10.20 a.m.

HOW TO LOAD NIGHT RAIDER

ATARI ST
Insert your NIGHT RAIDER disk into the drive, then turn on the computer. The program will load and run automatically.

Plug your mouse into port 0.

COMMODORE 64/128
Cassette:
Insert the NIGHT RAIDER cassette into your cassette unit and, if necessary, rewind the tape to the start of side 1. Press **SHIFT** and **RUN/STOP** simultaneously, then press **PLAY** on your cassette unit and NIGHT RAIDER will load and run automatically.

Disk:
Insert the NIGHT RAIDER disk into your disk drive, turn on the drive and the computer, then type **LOAD"*",8,1**. NIGHT RAIDER will load and run automatically.

Plug a joystick into port 2.

SPECTRUM 48K
Set up your Spectrum and cassette unit as shown in your owner's manual. Insert your NIGHT RAIDER cassette and, if necessary, rewind to the start of side 1.

Type **LOAD""** and press **RETURN** then press **PLAY** on your cassette unit. NIGHT RAIDER will load and run automatically.

SPECTRUM 128K/+2
Turn on your Spectrum 128K computer, insert your NIGHT RAIDER cassette and, if necessary, rewind to the start of side 1.

On the Spectrum start-up screen move the cursor over **TAPE LOADER** and press **RETURN** and then press **PLAY** on the cassette unit. NIGHT RAIDER will load and run automatically.

SPECTRUM 128K/+3
Turn on your Spectrum +3, insert your NIGHT RAIDER disk, label side up, into the disk drive.

On the Spectrum +3 start-up screen move the cursor over **LOADER** and press **RETURN**. NIGHT RAIDER will load and run automatically.

AMSTRAD CPC
Cassette:
Turn on your computer, insert your NIGHT RAIDER cassette into the cassette unit, rewind the tape to the start of side 1 if necessary.

Press **CONTROL** and the small **ENTER** key simultaneously, then any key on the keyboard. Press **PLAY** on the cassette unit. NIGHT RAIDER will load and run automatically.

AMSTRAD CPC
Disk:
Turn on your computer, insert your NIGHT RAIDER disk, label side up, into the disk drive and type **: CPM** then press **RETURN** NIGHT RAIDER will load and run automatically.

IBM PC and COMPATIBLES
Set up your IBM PC or compatible as shown in the owner's manual. Insert your DOS disk into the disk drive (drive A on a two drive system), then turn on your computer. When DOS has loaded, insert your NIGHT RAIDER disk into the disk drive, label side up, type **RAIDER** and press **ENTER** to load NIGHT RAIDER. Also by running **'INSTALL.BAT'** NIGHT RAIDER can be installed on a Hard Disk.

COMMODORE AMIGA
Set up your AMIGA as shown in the owner's manual. Insert the NIGHT RAIDER disk into the disk drive, label side up, turn on the computer and click the pointer on the 'NIGHT RAIDER' icon, NIGHT RAIDER will load and run automatically.

APPLE II SERIES
Set up your Apple II as shown in the owner's manual. Insert the NIGHT RAIDER disk into the disk drive, label side up, turn on the computer and NIGHT RAIDER will load and run automatically.

FLIGHT TRAINING

Before you venture out into the war zone, it's a good idea to practice flying the Avenger – even if you already have plenty of flying experience.

At the time of this historic event, the Avenger was only a prototype – so even the most experienced pilots needed to quickly familiarize themselves with its various controls.

THE CONTROLS
TO ASCEND – Pull **BACK** on the joystick.
TO DESCEND – Push **FORWARD** on the joystick.
TO BANK TO THE RIGHT – Push the joystick **RIGHT**.
TO BANK TO THE LEFT – Push the joystick **LEFT**.
TO BRAKE – Press the **K** key (On CBM 64/Amiga/IBM use **F1** instead).

To control a switch (from ON to OFF, UP to DOWN, '1' to '3' etc)
Using the joystick/mouse, move the cursor across the control panel until it is pointing to the desired selection. Then press the **FIRE** button.

TO VIEW THE PILOT SCREEN – Press **1**.
TO VIEW THE ENGINEER SCREEN – Press **2**.
TO VIEW THE NAVIGATOR SCREEN (Map) – Press **3**.
TO VIEW THE TAIL GUNNER SCREEN – Press **4**.

To switch between GUN CURSOR and CONTROL YOKE (on the Pilot Screen) – Press the **SPACE BAR** (or the **RIGHT HAND MOUSE BUTTON** on certain computers). Use **F** on IBM PC, compatibles and Amiga.

TO FIRE THE MACHINE GUN – Press **FIRE** on the joystick, (or the **LEFT HAND MOUSE BUTTON** on certain computers).

On the Apple version of NIGHT RAIDER the **OPEN APPLE KEY** can be used to fire bullets, or to drop the destination marker on the Navigator's screen.

TO DROP A TORPEDO – (varies according to the computer being used):
ATARI ST – Press **L** twice (once to ready it, then again to launch it).

SPECTUM & AMSTRAD – As Atari ST.

IBM PC – Press **F2** twice (once to ready it, then again to launch it).

AMIGA – As IBM PC.

CBM 64 – Press **F3** twice.

APPLE – as Atari ST.

TO SEE STATUS SCREEN – Press **S** key (press **F10** on IBM & Amiga)

TO PAUSE – Press **P** key (press **F7** on CBM 64).

On the CBM 64 use **F5** to switch sound ON/OFF.

TO QUIT – (this varies according to the computer being used):
ATARI ST – Press **ESC** twice.
SPECTRUM & AMSTRAD – Press **Q**.
IBM PC – Press **ESC**.
Amiga – Press **ESC**.
Apple II – Press **CONTROL** and **R** together.
CBM 64 – Press **RUN/STOP** and **RESTORE** together.

NOTE FOR SPECTRUM AND AMSTRAD CPC USERS
The following keys may be used instead of using a joystick:–
TO ASCEND – Use the **N** key.
TO DESCEND – Use the **J** key.
TO BANK TO THE RIGHT – Use the **X** key.
TO BANK TO THE LEFT – Use the **Z** key.
TO FIRE THE MACHINE GUN – Use the **I** key.
All the other keys are as previously mentioned.

NOTE FOR IBM PC AND COMPATIBLE USERS

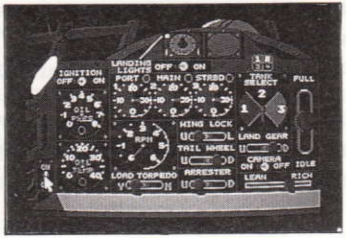
The CURSOR (arrow) keys are used for the following:–

ON THE PILOT SCREEN – to move the yoke or the gun sight.
ON TAIL GUNNER SCREEN – to move the gun sight.
ON ENGINEER SCREEN – to move cursor between switches.
ON NAVIGATOR SCREEN – to move cursor.

The **SPACE BAR** is used on the Navigator screen to place the destination marker and on the Pilot screen to fire bullets.

On the Engineer screen use **SHIFT** and the **CURSOR** keys together to move a switch or lever.

Control Panel/Engineer View



TAKING OFF

To ensure a successful take off, follow these steps:–

1. Turn on the engineer's light, clicking on LIGHTS ON (or the light switch).
2. Select a fuel tank by clicking on fuel segment 1, 2 or 3.
3. Adjust the fuel mixture (rich for take off, lean for flying).
4. Push the THROTTLE KNOB to the full position.
5. Set the ARRESTER to UP position.
6. Ensure the WING LOCK is locked.
7. Start the engine by clicking on ON.
8. Return to the PILOT'S SCREEN by pressing **1**.
9. Release the brake by pressing the **K** key.
10. As you near the end of the deck, gently bring the nose of the Avenger up by pulling **BACK** on the joystick.
11. Once you have cleared the *Ark Royal's* deck and are airborne, return to the ENGINEER'S SCREEN (press **2**) to set the fuel mixture and throttle to medium values. The Avenger will stop shaking and you'll conserve fuel. Do this quickly or your aircraft may explode.

LANDING

Once you are heading towards the *Ark Royal*, (see TO SET A FLIGHT PATTERN, page 8), adhere to the following checklist:

1. Enter the ENGINEER'S SCREEN by pressing **2**.
2. Turn on your LANDING LIGHTS.
3. Reduce your airspeed to under 175 mph.
4. Make sure your ALTIMETER reads between 50 and 100 feet.
5. Keep your descent at a rate no greater than four feet per second.
6. Ensure the nose of the aircraft is level or slightly up.
7. Place the LANDING GEAR and the ARRESTER in the DOWN position.

THE REAL THING

Now that you have had some practice flying the Avenger, the Air Force is ready to send you into *real* combat.

To ensure everyone gets a fair deal, the captain will make you pick straws to determine your mission. The short straw will be the most difficult mission.

If you're not entirely happy with your selected mission, the straws can be re-shuffled and you can try again. However, don't do this too many times – or the captain may think you're not a dedicated pilot.

Once a mission has been accepted, prepare yourself for a *real life* attack on the German naval forces.

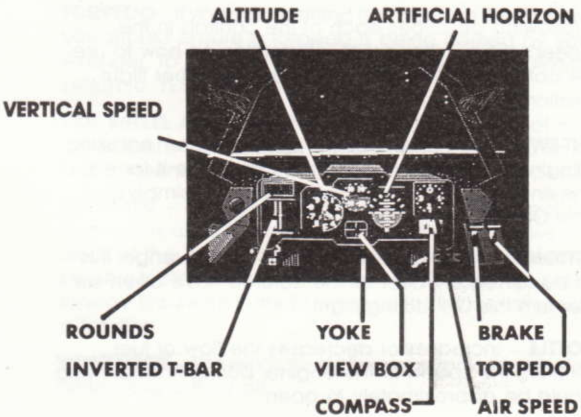
FOUR VIEWS FROM THE AVENGER

There are four possible viewpoints on your Avenger bomber. To move from screen to screen press the appropriate key on your keyboard. Each screen will be described in detail in the following sections.

1. Pilot's View

This is the cockpit. It is from this screen that you actually fly the aircraft. Here you make sure you don't go too high or too low, too fast or too slow.

You can also launch the torpedoes from the Pilot's screen – though much of your combat is handled from the Tail Gunner position.



The following is a description of each of the Cockpit Controls – along with information on how to use these controls in flight and in combat.

AIRSPEED – The numbers on the dial are indicated in 100's.
TO INCREASE THE AIRSPEED – push forward on the throttle.
TO DECREASE THE AIRSPEED – pull back on the throttle.

ALTITUDE – This gauge indicates the height of the Avenger above sea level.
The largest needle indicates altitude in 10's.
The medium needle indicates altitude in 100's.
The small needle indicates altitude in 1000's.

ARTIFICIAL HORIZON – This shows you where the horizon is in relation to the water out of the pilot's window. This is especially valuable when flying at night, in clouds, or in other low visibility situations.

VERTICAL SPEED – The numbers indicate up or down speed in 10's.

INVERTED T-BAR – This indicates the position of the ailerons and rudder.

COMPASS – To ensure that you are heading in the correct direction. Lining up to the red marker follows the flight plan.

BRAKE – This will stop you on the runway. To stop, bring the brake forward by pressing the **K** key on your keyboard.

THROTTLE – This increases your power. To do so raise the throttle lever.

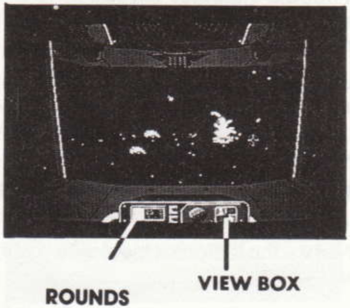
YOKE – Use this to steer the aircraft.
TO ASCEND – pull **BACK** on the joystick.
TO DESCEND – push **FORWARD** on the joystick.
TO BANK – move the joystick either **LEFT** or **RIGHT**.

TORPEDO – When this lever is forward a torpedo is ready for launch. To ready the torpedo press the **L** key. To launch the torpedo press **L** again.

ROUNDS (AMMUNITION) REMAINING – When the revolving indicator reaches zero you have exhausted your fire power.

VIEW BOX – This flashes to indicate when you are needed at another position (i.e. if an attack is taking place on another of the four available screens).

2. *Tail Gunner View*



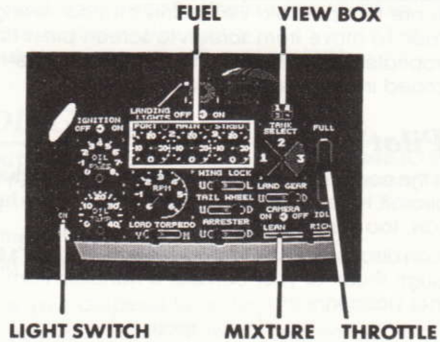
ROUNDS (AMMUNITION) REMAINING – When the indicator reaches zero, you will have run out of fire power.

CONTROLLING THE GUNSIGHT – Use the joystick/mouse to move the gunsight over oncoming targets.

VIEW BOX – This flashes to indicate when you are needed at another position (i.e. if an attack is taking place on another of the four available screens).

3. *Engineer's View*

From this screen you'll prepare your Avenger for take off and landings. It is also the screen on which you will check to make sure everything is in order. If it's not it may be a good idea to return to the *Ark Royal* to repair the problem before matters get worse.



The following describes each of the controls in the Engineer's View – along with information on how to use these controls for take offs, landings, and other flight operations.

LIGHT SWITCH – Always keep the lights OFF when not using the Engineer's screen as the lights can make it far easier for the enemy to spot you. To switch the lights, simply click on the ON or OFF.

IGNITION – In order to start the engine of the Avenger this must be turned on, after all the controls have been set. Never turn this OFF during flight.

THROTTLE – Increases or decreases the flow of fuel, controlling the speed of the engine. During normal flying it should be approximately ¾ open.

MIXTURE – This lever adjusts the ratio of fuel and air flowing through the engine. Use a richer mixture for take offs and fast get aways. Use a leaner mixture for normal flight.

LANDING LIGHTS – This switch controls the lights on the runway of the *Ark Royal's* deck. Without them on you cannot land. Once they are on, the view of the landing strip will orient itself for a successful landing.

FUEL – The three marked quadrants represent your three fuel tanks. One tank must be selected before the engine can be started. When one tank is empty, you must switch to another tank. The main fuel tank is number 2, this tank holds three times as much fuel as the wing tanks (number 1 and 3).

You will know when a tank is almost empty when the engine starts to stall. If you switch immediately to another tank containing fuel the engine will automatically restart.

CAMERA – Switching this to on before take off, will enable you to see a playback of your attack on the *Bismarck*.

TORPEDO – If you are planning an attack on the *Bismarck*, you should ensure a torpedo is being carried by your Avenger. To load the torpedo, flick the LOAD TORPEDO switch to 'YES' prior to take off.

TAIL WHEEL AND LANDING GEAR – Ensure both of these are in the DOWN position before you attempt to land. During normal flying they should both be in the UP position.

ARRESTER – This hook which dangles from the rear of the Avenger is used to catch onto the landing cables on the deck of the *Ark Royal*. Without it you would probably not be able to stop the aircraft before reaching the end of the runway. Ensure it is in the DOWN position before attempting a landing.

WING LOCK – The wings must always be locked on before attempting a take off.

RPM – or Revolutions Per Minute. This measures the speed of your engine. To adjust the engine speed move the throttle UP or DOWN. Avoid over-revving the engine, the red line is at 5000 RPM.

OIL PRESSURE/OIL TEMPERATURE – Check these gauges frequently to ensure your engine is running smoothly. Try not to let the oil temperature rise above 00 and not to let the pressure drop below 00. Both of these circumstances could cause engine failure. Once the engine does fail it cannot be re-started and you'll have to attempt to ditch the aircraft before it crashes.

NOTE: There is no camera on the Spectrum and Amstrad CPC versions.

4. Navigator's View

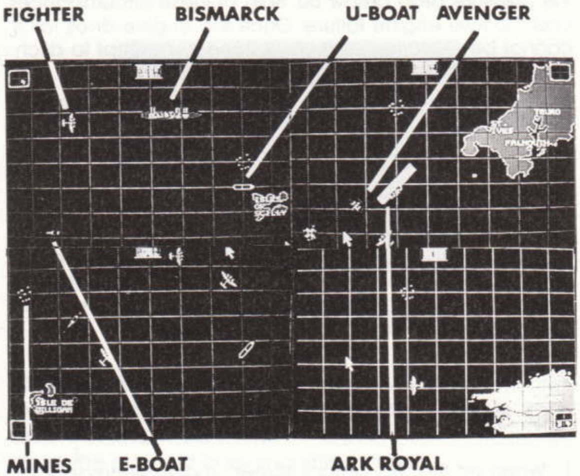
From this view you'll create 'flight plans' and monitor reports regarding the location of your enemy. On some versions of NIGHT RAIDER the map is made up of four quadrants, to move between the quadrants, simply move the cursor with your joystick/mouse.

TO SET A FLIGHT PLAN

1. When on the Navigator's screen, move the joystick to select the desired quadrant.

2. With the joystick/mouse, move the cursor to the desired location and press the **FIRE BUTTON**. (This will cause the destination cursor to drop onto the map.)

3. On the Pilot's screen, line up with the marker which now appears on the compass showing the direction of your course.



AVENGER – This is the location of the *Grumman Avenger* you are flying.

ARK ROYAL – Your home base, the *HMS Ark Royal* aircraft carrier.

ENEMY FIGHTERS – These are advance radar sitings of enemy *Dornier* aircraft.

Each plane on the map represents 1 – 10 of these aircraft, flying in formation.

E-BOATS – These are the German's answer to the U.S. PT class boats.

Each one carries anti-aircraft guns.

Each one of these boats on the map represents 1 – 5 boats sailing together.

U-BOATS – These are German submarines armed with both anti-aircraft guns and torpedoes. However, they are especially deadly as they can only be spotted when they surface.

Each one of these represents 1 – 5 U-Boat submarines sailing together.

BISMARCK – This is your ultimate target!!

NAVIGATIONAL TIPS

- Return to the *Ark Royal* frequently. This will give you a chance to refuel your tanks and restock your ammunition. Also, any damage done to your plane will be repaired.
- Fly trial runs to see how far a full load of fuel will take you. Even though you may have sunk the *Bismarck*, you will still need enough fuel to return to the *Ark Royal* to successfully complete your mission.
- When landing keep the nose of the Avenger up, keep your airspeed below 100 mph and ensure your rate of descent is less than 5 feet per second.
- When approaching the *Ark Royal* for a landing, do not worry about approaching her from the rear. As soon as you turn the landing lights on, the *Ark Royal* will re-orientate herself for you.
- Check your status screen (by pressing the **S** key) regularly to see the extent of the damage inflicted on the *Ark Royal* and on your Avenger.

- If you do run out of fuel or if your plane experiences engine failure, you can ditch your Avenger in the ocean. If you do so successfully, you will be rescued and will live to fight another day.

To ditch your plane – land very gently at the lowest possible speed (under 100 mph) with your landing gear in the UP position. Once you've hit the water, switch the enging OFF immediately and wait for the rescue team.

COMBAT TACTICS

- When releasing torpedoes, fly very low. This lets the torpedoes skim the water, increasing your chances for a perfect 'hit'.
- Fly at less than 2000 feet as often as possible so you can avoid being picked up on enemy radar. This is also a valuable tactic for dive bombing enemy targets and for landing on the *Ark Royal.*
- If a spotlight is tracking you, lose it by quickly changing direction to get out of range of the light.
- Remember to keep your lights off on the Engineer's screen – except when they are definitely needed. Flak increases when the enemy can see you.
- It is a good idea to eliminate as many U-boats and E-boats as you can before attempting to torpedo the *Bismarck.* Otherwise the *Ark Royal* will still be in danger even if the *Bismarck* has been sunk.
- Protect the *Ark Royal* at all costs. Avoid confrontations unless the *Ark Royal* is in danger because flak from enemy fire can easily destroy your Avenger.

ABOUT THE AVENGER

The *Grumman Avenger* – codenamed "Blackhawk" – earned a reputation as the most deadly torpedo bomber ever developed during World War II. It quickly became the standard torpedo bomber for the entire US Navy and was produced in larger numbers than any other torpedo bomber in history.

The Avenger carried a crew of three men: a pilot, a gunner and a navigator/radio operator who also manned the lower gun in some models.

Following the success of the "Blackhawk" mission against the *Bismarck,* more Avengers were ordered for June 1942 for the battle of Midway. They also took part in battles against the Japanese at Rubuul, and in February 1944, Avengers destroyed more than 250 Japanese aircraft on the ground in the Turk Islands.

An integral force in both the Atlantic and Pacific naval campaigns, Grumman Avengers also engaged in anti-submarine operations. They were carried out from small escort carriers beginning in February 1943. By the spring of 1944 they had eliminated enemy submarines from all the major shipping lines.

Here are some of the Avenger's statistics:

Wingspan – 54 feet 2 inches
Engines – Two Wright double row R-2600 Cyclones.
Maximum Horsepower – 1600 BHP.
Top Speed – 300 mph.
Carrying Capacity – 2000 pounds of bombs or a standard torpedo.
Other Armament – .50 caliber machine gun in front cowl and another in the power operated ball turret.

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